

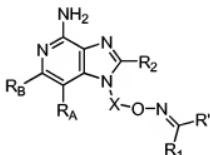
**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

1.-17. (Canceled)

18. (Currently amended) A compound of the formula (II):



wherein:

X is selected from the group consisting of -CH(R<sub>9a</sub>)-alkylene- and -CH(R<sub>9a</sub>)-alkenylene-, wherein the alkylene and alkenylene are optionally interrupted by one or more -O- groups;

R<sub>1</sub> and R' are independently selected from the group consisting of:

hydrogen,

alkyl,

alkenyl,

aryl,

arylalkylenyl,

heteroaryl,

heteroarylalkylenyl,

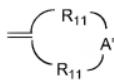
heterocyclyl,

heterocyclylalkylenyl, and

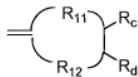
alkyl, alkenyl, aryl, arylalkylenyl, heteroaryl, heteroarylalkylenyl, heterocyclyl, or heterocyclylalkylenyl, substituted by one or more substituents selected from the group consisting of:

hydroxyl,  
 alkyl,  
 haloalkyl,  
 hydroxyalkyl,  
 alkoxy,  
 dialkylamino,  
 -S(O)<sub>0-2</sub>-alkyl,  
 -S(O)<sub>0-2</sub>-aryl,  
 -NH-S(O)<sub>2</sub>-alkyl,  
 -NH-S(O)<sub>2</sub>-aryl,  
 haloalkoxy,  
 halogen,  
 nitrile,  
 nitro,  
 aryl,  
 heteroaryl,  
 heterocycll,  
 aryloxy,  
 arylalkyleneoxy,  
 -C(O)-O-alkyl,  
 -C(O)-N(R<sub>8</sub>)<sub>2</sub>,  
 -N(R<sub>8</sub>)-C(O)-alkyl,  
 -O-C(O)-alkyl, and  
 -C(O)-alkyl;

or R<sub>1</sub> and R' can join together to form a ring system selected from the group consisting of:



wherein the total number of atoms in the ring is 4 to 9, and



wherein the total number of atoms in the ring is 4 to 9;

$R_A$  and  $R_B$  are each independently selected from the group consisting of:

- hydrogen;
- halogen;
- alkyl;
- alkenyl;
- alkoxy;
- alkylthio, and
- $-N(R_9)_2;$

or when taken together,  $R_A$  and  $R_B$  to form a 6-membered fused aryl ring or heteroaryl ring containing one heteroatom selected from the group consisting of N and S, wherein the aryl or heteroaryl ring is unsubstituted or substituted by one or more R groups, or substituted by one  $R_3$  group, or substituted by one  $R_3$  group and one R group;

or when taken together,  $R_A$  and  $R_B$  form a fused 5 to 7 membered saturated ring, optionally containing one heteroatom selected from the group consisting of N and S, and unsubstituted or substituted by one or more R groups;

R is selected from the group consisting of:

- halogen,
- hydroxyl,
- alkyl,
- alkenyl,
- haloalkyl,
- alkoxy,
- alkylthio, and
- $-N(R_9)_2;$

$R_2$  is selected from the group consisting of:

- hydrogen,
- alkyl, and

-alkoxyalkyl;

$R_3$  is selected from the group consisting of:

- $Z-R_4[[,]]$ ;

- $Z-X' R_{45}$

- $Z-X' Y R_4$ , and

- $Z-X' R_5$ ;

each  $X'$  is independently selected from the group consisting of alkylene, alkenylene, alkynylene, arylene, heteroarylene, and heteroacylenylene, wherein the alkylene, alkenylene, and alkynylene groups can be optionally interrupted or terminated with arylene, heteroarylene, or heteroacylenylene, and optionally interrupted by one or more  $O$  groups;

each  $Y$  is independently selected from the group consisting of:

- $S(O)_{0-2}$ ,

- $S(O)_2 N(R_8)$ ,

- $C(R_6)$ ,

- $C(R_6)O$ ,

- $O-C(R_6)$ ,

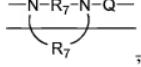
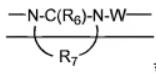
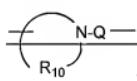
- $O-C(O)O$ ,

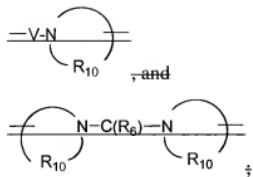
- $N(R_8)Q$ ,

- $C(R_6)N(R_8)$ ,

- $O-C(R_6)N(R_8)$ ,

- $C(R_6)N(OR_9)$ ,

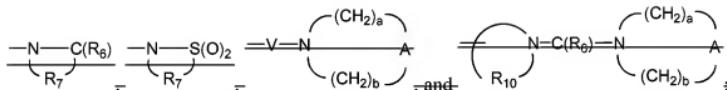




Z is a bond or -O-;

each R<sub>4</sub> is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxyl, mercapto, cyano, aryl, aryloxy, arylalkyleneoxy, heteroaryl, heteroaryloxy, heteroarylalkyleneoxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkyleneoxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;

each R<sub>5</sub> is independently selected from the group consisting of:



each R<sub>6</sub> is independently selected from the group consisting of =O and =S;

each R<sub>7</sub> is independently C<sub>2-7</sub> alkylene;

each R<sub>8</sub> is independently selected from the group consisting of hydrogen, C<sub>1-10</sub> alkyl, C<sub>2-10</sub> alkenyl, C<sub>1-10</sub> alkoxy-C<sub>1-10</sub> alkylene, and aryl-C<sub>1-10</sub> alkylene;

each R<sub>9</sub> is independently selected from the group consisting of hydrogen and alkyl;

R<sub>9a</sub> is selected from the group consisting of hydrogen and alkyl which is optionally interrupted by one or more -O- groups;

each R<sub>10</sub> is independently C<sub>3-8</sub> alkylene;

$R_c$  and  $R_d$  are independently selected from the group consisting of hydrogen, halogen, hydroxyl, alkyl, alkenyl, aryl, haloalkyl, alkoxy, alkylthio, and  $-N(R_9)_2$ ; or  $R_c$  and  $R_d$  can join to form a fused aryl ring or fused 5-10 membered heteroaryl ring containing one to four heteroatoms;

each  $R_{11}$  is independently  $C_{1-6}$  alkylene or  $C_{2-6}$  alkenylene, wherein the alkylene or alkenylene is optionally interrupted by one heteroatom;

$R_{12}$  is selected from the group consisting of a bond,  $C_{1-5}$  alkylene, and  $C_{2-5}$  alkenylene, wherein the alkylene or alkenylene is optionally interrupted by one heteroatom;

each  $A$  is independently selected from the group consisting of  $O$ ,  $C(O)$ ,  $CH_2$ ,  $S(O)_{0-2}$ , and  $N(R_4)$ ;

$A'$  is selected from the group consisting of  $-O-$ ,  $-S(O)_{0-2}$ ,  $-N(-Q-R_4)-$ , and  $-CH_2-$ ; and

each  $Q$  is independently selected from the group consisting of a bond[[.]] and  $-C(R_6)-$ ,  $C(R_6)C(R_6)$ ,  $S(O)_2$ ,  $C(R_6)N(R_8)W$ ,  $S(O)_2N(R_8)$ ,  $C(R_6)O$ , and  $C(R_6)N(OR_9)$ ;

each  $V$  is independently selected from the group consisting of  $C(R_6)$ ,  $O-C(R_6)$ ,  $N(R_8)C(R_6)$ , and  $S(O)_2$ ;

each  $W$  is independently selected from the group consisting of a bond,  $C(O)$ , and  $(O)_2$ ;

$a$  and  $b$  are independently integers from 1 to 6 with the proviso that  $a + b$  is  $\leq 7$ ;

or a pharmaceutically acceptable salt thereof.

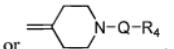
19. (Canceled)

20. (Previously presented) The compound or salt of claim 18 wherein X is  $-C_{3-5}$  alkylene- or  $-CH_2CH_2OCH_2CH_2-$ .

21. (Previously presented) The compound or salt of claim 18 wherein at least one of  $R'$  or  $R_1$  is hydrogen.

22. (Previously presented) The compound or salt of claim 18 wherein at least one of  $R'$  or  $R_1$  is selected from the group consisting of aryl, heteroaryl, and alkyl, wherein the aryl, heteroaryl, and alkyl are optionally substituted.

23-25. (Canceled)

26. (Currently amended) The compound or salt of claim 18 wherein R' and R<sub>1</sub> join together to form a the ring system of the formula; is    <sub>1</sub> wherein Q is a bond or -C(O)-, and R<sub>4</sub> is alkyl.

27. (Previously presented) The compound or salt of claim 18 wherein R<sub>1</sub> and R' are each methyl.

28. (Canceled)

29. (Canceled)

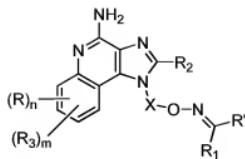
30. (Previously presented) The compound or salt of claim 18 wherein R<sub>2</sub> is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, ethoxymethyl, methoxyethyl, and methoxymethyl.

31. (Canceled)

32. (Currently amended) The compound or salt of claim 18 wherein R<sub>A</sub> and R<sub>B</sub> form a fused aryl ring ~~or heteroaryl ring containing one N~~, wherein the aryl ring ~~or heteroaryl ring~~ is unsubstituted.

33. (Canceled)

34. (Currently amended) A compound of the formula (III):



## III

wherein:

X is selected from the group consisting of -CH(R<sub>9a</sub>)-alkylene- and -CH(R<sub>9a</sub>)-alkenylene-, wherein the alkylene and alkenylene are optionally interrupted by one or more -O- groups;

each R is independently selected from the group consisting of:

- halogen,
- hydroxyl,
- alkyl,
- alkenyl,
- haloalkyl,
- alkoxy,
- alkylthio, and
- N(R<sub>9</sub>)<sub>2</sub>;

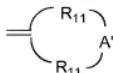
R<sub>1</sub> and R' are independently selected from the group consisting of:

- hydrogen,
- alkyl,
- alkenyl,
- aryl,
- arylalkylenyl,
- heteroaryl,
- heteroarylalkylenyl,
- heterocyclyl,
- heterocyclalkylenyl, and

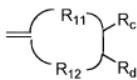
alkyl, alkenyl, aryl, arylalkylenyl, heteroaryl, heteroarylalkylenyl, heterocyclyl, or heterocyclylalkylenyl, substituted by one or more substituents selected from the group consisting of:

- hydroxyl,
- haloalkyl,
- hydroxyalkyl,
- alkoxy,
- dialkylamino,
- S(O)<sub>0-2</sub>-alkyl,
- S(O)<sub>0-2</sub>-aryl,
- NH-S(O)<sub>2</sub>-alkyl,
- NH-S(O)<sub>2</sub>-aryl,
- haloalkoxy,
- halogen,
- nitrile,
- nitro,
- aryl,
- heteroaryl,
- heterocyclyl,
- aryloxy,
- arylalkyleneoxy,
- C(O)-O-alkyl,
- C(O)-N(R<sub>8</sub>)<sub>2</sub>,
- N(R<sub>8</sub>)-C(O)-alkyl,
- O-C(O)-alkyl, and
- C(O)-alkyl;

or R<sub>1</sub> and R' can join together to form a ring system selected from the group consisting of:



wherein the total number of atoms in the ring is 4 to 9, and



wherein the total number of atoms in the ring is 4 to 9;

$R_2$  is selected from the group consisting of:

- hydrogen,
- alkyl, and
- alkoxyalkyl;

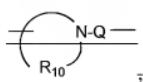
$R_3$  is selected from the group consisting of:

- $-Z-R_{47}$
- $-Z-X' R_{47}$
- $-Z-X' Y R_{47}$ , and
- $-Z-X' R_5$ ;

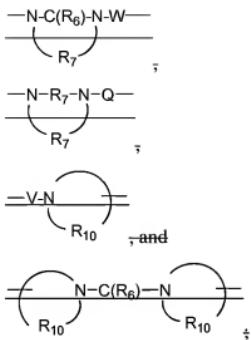
each  $X'$  is independently selected from the group consisting of alkylene, alkenylene, alkynylene, arylene, heteroarylene, and heteroacylenylene, wherein the alkylene, alkenylene, and alkynylene groups can be optionally interrupted or terminated with arylene, heteroarylene, or heteroacylenylene, and optionally interrupted by one or more  $-O-$  groups;

each  $Y$  is independently selected from the group consisting of:

- $-S(O)_{0-2}-$ ,
- $-S(O)_2 N(R_8)-$ ,
- $-C(R_6)-$ ,
- $-C(R_6)-O-$ ,
- $-O-C(R_6)-$ ,
- $-O-C(O)-O-$ ,
- $-N(R_8)-Q-$ ,
- $-C(R_6)-N(R_8)-$ ,
- $-O-C(R_6)-N(R_8)-$ ,
- $-C(R_6)-N(OR_9)-$ ,



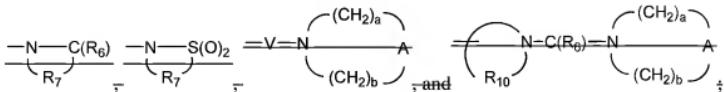
;



Z is a bond or -O-;

each  $R_4$  is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxylalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxyl, mercapto, cyano, aryl, aryloxy, arylalkyleneoxy, heteroaryl, heteroaryloxy, heteroarylalkyleneoxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkyleneoxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;

each  $R_5$  is independently selected from the group consisting of:



each  $R_6$  is independently selected from the group consisting of =O and =S;

each  $R_7$  is independently  $C_{2-7}$  alkylene;

each  $R_8$  is independently selected from the group consisting of hydrogen,  $C_{1-10}$  alkyl,  $C_{2-10}$  alkenyl,  $C_{1-10}$  aryloxy- $C_{1-10}$  alkylene, and aryl- $C_{1-10}$  alkylene;

each R<sub>9</sub> is independently selected from the group consisting of hydrogen and alkyl;  
R<sub>9a</sub> is selected from the group consisting of hydrogen and alkyl which is optionally interrupted by one or more -O- groups;

each R<sub>10</sub> is independently C<sub>3-8</sub> alkylene;

R<sub>c</sub> and R<sub>d</sub> are independently selected from the group consisting of hydrogen, halogen, hydroxyl, alkyl, alkenyl, aryl, haloalkyl, alkoxy, alkylthio, and -N(R<sub>9</sub>)<sub>2</sub>; or R<sub>c</sub> and R<sub>d</sub> can join to form a fused aryl ring or fused 5-10 membered heteroaryl ring containing one to four heteroatoms;

each R<sub>11</sub> is independently C<sub>1-6</sub> alkylene or C<sub>2-6</sub> alkenylene, wherein the alkylene or alkenylene is optionally interrupted by one heteroatom;

R<sub>12</sub> is selected from the group consisting of a bond, C<sub>1-5</sub> alkylene, and C<sub>2-5</sub> alkenylene, wherein the alkylene or alkenylene is optionally interrupted by one heteroatom;

each A is independently selected from the group consisting of O, C(O), CH<sub>2</sub>, S(O)<sub>0-2</sub>-, and N(R<sub>9</sub>);

A' is selected from the group consisting of -O-, -S(O)<sub>0-2</sub>-, -N(-Q-R<sub>4</sub>)-, and -CH<sub>2</sub>-; and

each Q is independently selected from the group consisting of a bond[[.]] and -C(R<sub>6</sub>)-<sub>1-5</sub>-C(R<sub>6</sub>)-C(R<sub>6</sub>)-, S(O)<sub>2</sub>, C(R<sub>6</sub>)N(R<sub>8</sub>)W, S(O)<sub>2</sub>N(R<sub>8</sub>), C(R<sub>6</sub>)O, and C(R<sub>6</sub>)N(OR<sub>9</sub>);

each V is independently selected from the group consisting of C(R<sub>6</sub>), O-C(R<sub>6</sub>), N(R<sub>8</sub>)-C(R<sub>6</sub>), and S(O)<sub>2</sub>-;

each W is independently selected from the group consisting of a bond, C(O), and S(O)<sub>2</sub>;

a and b are independently integers from 1 to 6 with the proviso that a + b is  $\leq$  7;

n is an integer from 0 to 4;

and m is 0 or 1, with the proviso that when m is 1, n is 0 or 1;

or a pharmaceutically acceptable salt thereof.

35. (Canceled)

36. (Previously presented) The compound or salt of claim 34 wherein X is -C<sub>3-5</sub> alkylene- or -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>-.

37. (Previously presented) The compound or salt of 34 wherein at least one of R' or R<sub>1</sub> is hydrogen.

38. (Previously presented) The compound or salt of claim 34 wherein at least one of R' or R<sub>1</sub> is selected from the group consisting of aryl, heteroaryl, and alkyl, wherein the aryl, heteroaryl, and alkyl are optionally substituted.

39-41. (Canceled)

42. (Currently amended) The compound or salt of claim 34 wherein R' and R<sub>1</sub> join together to form a the ring system of the formula: is    <sup>2</sup>, or  <sup>2</sup>, wherein Q is a bond or -C(O)-, and R<sub>4</sub> is alkyl.

43. (Previously presented) The compound or salt of claim 34 wherein R<sub>1</sub> and R' are each methyl.

44. (Canceled)

45. (Canceled)

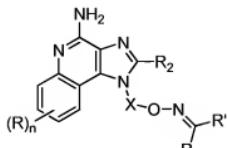
46. (Previously presented) The compound or salt of claim 34 wherein R<sub>2</sub> is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, ethoxymethyl, 2-methoxyethyl, and methoxymethyl.

47. (Canceled)

48. (Previously presented) The compound or salt of claim 34 wherein m and n are each 0.

49-62. (Canceled)

63. (Currently amended) A compound of the formula (V):



V

wherein:

X is selected from the group consisting of -CH(R<sub>9a</sub>)-alkylene- and -CH(R<sub>9a</sub>)-alkenylene-; R<sub>1</sub> and R' are independently selected from the group consisting of:

- hydrogen,
- alkyl,
- alkenyl,
- aryl,
- alkylene-aryl,
- heteroaryl,
- heterocyclyl, and

alkyl, alkenyl, aryl, arylalkylenyl, heteroaryl or heterocyclyl substituted by one or more substituents selected from the group consisting of:

- hydroxyl,
- alkyl,
- haloalkyl,
- hydroxyalkyl,
- O-alkyl,
- S-alkyl,
- O-haloalkyl,
- halogen,

nitrile,  
aryl,  
heteroaryl,  
heterocycyl,  
-O-aryl,  
-O-alkylene-aryl,  
-C(O)-O-alkyl,  
-C(O)-N(R<sub>8a</sub>)<sub>2</sub>, and -N(R<sub>8a</sub>)-C(O)-alkyl;

or R<sub>1</sub> and R' can join together to form a ring system containing one or two saturated or unsaturated rings optionally including one or more heteroatoms;

n is an integer from 0 to 4;

each R is independently selected from the group consisting of alkyl, alkoxy, halogen, hydroxyl, and trifluoromethyl;

R<sub>2</sub> is selected from the group consisting of:

hydrogen,  
alkyl, and  
alkoxyalkyl;

~~Y" is O or O-S(O)<sub>0-2</sub>~~

R<sub>9a</sub> is selected from the group consisting of hydrogen and alkyl which may be optionally interrupted by one or more -O- groups; and

each R<sub>8a</sub> is independently selected from the group consisting of hydrogen, C<sub>1-10</sub> alkyl, and C<sub>2-10</sub> alkenyl; or a pharmaceutically acceptable salt thereof.

64.-133. (Canceled)

134. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 18 in combination with a pharmaceutically acceptable carrier.

135. (Withdrawn) A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 18 to the animal.

136. (Withdrawn) A method of treating a viral disease in an animal in need thereof comprising administering a therapeutically effective amount of a compound or salt of claim 18 to the animal.

137. (Withdrawn) A method of treating a neoplastic disease in an animal in need thereof comprising administering a therapeutically effective amount of a compound or salt of claim 18 to the animal.

138. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 34 in combination with a pharmaceutically acceptable carrier.

139. (Canceled)

140. (Withdrawn) A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 34 to the animal.

141. (Canceled)

142. (Withdrawn) A method of treating a viral disease in an animal in need thereof comprising administering a therapeutically effective amount of a compound or salt of claim 34 to the animal.

143. (Canceled)

144. (Withdrawn) A method of treating a neoplastic disease in an animal in need thereof comprising administering a therapeutically effective amount of a compound or salt of claim 34 to the animal.

145. (Canceled)